

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: ) Confirmation No: **5701**  
Barnes et al. )  
Serial No.: **10/509,400** ) Art Unit: **1616**  
Filed: **June 09, 2005** ) Examiner: **Arnold, E.**  
 ) Syngenta Matter No.: **50679**

**For: LOW FOAMING FORMULATION OF GLYPHOSATE**

## **BRIEF ON APPEAL**

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I hereby certify that this correspondence is being electronically transmitted to the United States Patent & Trademark Office (USPTO) using the USPTO's e-filing procedure on July 21, 2010.

/James D. Withers/

James D. Withers - Reg. No. 40,376

Dear Sir:

This is an appeal from the final Office Action mailed on January 07, 2010 rejecting claims 1 and 3-22.

A Notice of Appeal in this application was filed on April 21, 2010, and was received in the USPTO on April 21, 2010.

The \$540.00 fee required under 37 CFR §41.20(b)(2) for filing an appeal brief has been paid via an electronic fund transfer executed during the filing process of the present brief.

Appellants request the opportunity for a personal appearance before the Board of Appeals to argue the issues of this appeal. The fee for the personal appearance will be timely paid upon receipt of the Examiner's Answer.

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**REAL PARTY IN INTEREST**

The real party in interest is Syngenta Crop Protection, Inc. of Greensboro, North Carolina.

**RELATED APPEALS AND INTERFERENCES**

The assignee, the assignee's legal representatives, and the Appellants submit that there are no related appeals or interferences that are directly affected by or have a bearing on the Board's decision in this appeal.

**STATUS OF CLAIMS**

Claims 1 and 3-22 are pending in the present application.

Previously presented claims 2 and 23 have been canceled.

Claims 1 and 3-22 stand rejected. Each of rejected claims 1 and 3-22 has been appealed. A clean copy of the pending claims is attached in the Claims Appendix section below.

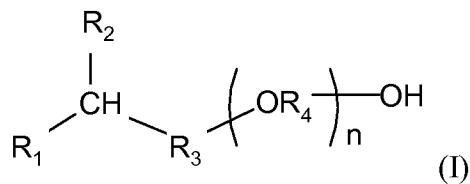
**STATUS OF AMENDMENTS**

No amendments have been filed after the final Office Action dated January 07, 2010.

**SUMMARY OF CLAIMED SUBJECT MATTER**

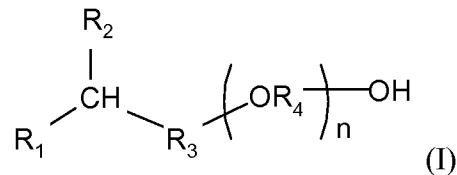
The claims of the present invention are directed to aqueous glyphosate concentrates, and methods of reducing the foaming of a glyphosate concentrate composition having a concentration of from 240 to 550 g/l based on glyphosate acid.

In independent claim 1, the claimed aqueous glyphosate concentrate (page 1, lines 5-6; page 2, lines 12-14; and page 5, lines 16-18) comprises glyphosate (page 2, lines 9-12) and a poly(alkylene oxide) alkanol having the formula



wherein R<sub>1</sub> and R<sub>2</sub> are methyl or ethyl, R<sub>3</sub> is a straight chain alkylene group containing from 5 to 12 carbon atoms, R<sub>4</sub> is an alkylene group containing 2 or 3 carbon atoms and n is from 4 to 20 (page 1, lines 19-24), wherein the concentration of the glyphosate is from 240 to 550 g/l based on glyphosate acid (page 1, lines 25-28; page 2, lines 14-20).

In independent claim 22, the claimed method of reducing the foaming of a glyphosate concentrate composition (page 1, lines 5-6; page 2, lines 12-14; and page 5, lines 16-18) having a concentration of from 240 to 550 g/l based on glyphosate acid (page 1, lines 25-28; page 2, lines 14-20) comprises incorporating in the composition a poly(alkylene oxide) alkanol of formula (I):



wherein R<sub>1</sub> and R<sub>2</sub> are methyl or ethyl, R<sub>3</sub> is a straight chain alkylene group containing from 5 to 12 carbon atoms, R<sub>4</sub> is an alkylene group containing 2 or 3 carbon atoms and n is from 4 to 20 (page 1, lines 25-28).

**GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

The following grounds of rejection are to be reviewed on appeal:

- 1) Whether claims 1 and 3-22 are patentable under 35 U.S.C. §103(a) over U.S. Patent No. 5,324,708 issued to Moreno et al. (hereinafter, “Moreno”) in combination with U.S. Patent No. 6,107,249 issued to Wikeley (hereinafter, “Wikeley”), U.S. Patent No. 5,078,782 issued to Nielson et al. (hereinafter, “Nielson’782”) and U.S. Patent No. 5,795,847 issued to Nielson et al. (hereinafter, “Nielson’847”).
- 2) Whether claims 1 and 3-22 are patentable under 35 U.S.C. §103(a) over Nielson’782 in combination with Moreno, Wikeley and Nielson’847.

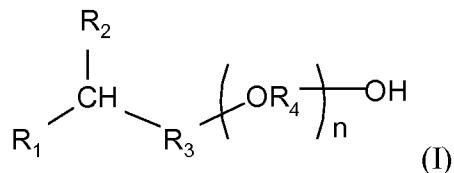
**ARGUMENTS**

**I. REJECTION OF CLAIMS 1 and 3-22 UNDER 35 U.S.C. §103(a) IN VIEW OF MORENO IN COMBINATION WITH WIKELEY, NIELSON'782 AND NIELSON'847**

Claims 1 and 3-22 stand rejected 35 U.S.C. §103(a) in view of the teaching of Moreno in combination with the teachings of Wikeley, Nielson'782 and Nielson'847. Reversal of this rejection is respectfully requested for the reasons provided below.

**A. CLAIMS 1, 3-12, 14, 16 19-20 AND 22**

Appellants' claimed invention, as embodied in independent claim 1, is directed to aqueous glyphosate concentrates comprising glyphosate and a poly(alkylene oxide) alkanol having the formula



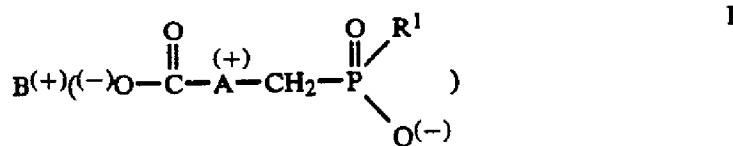
wherein R<sub>1</sub> and R<sub>2</sub> are methyl or ethyl, R<sub>3</sub> is a straight chain alkylene group containing from 5 to 12 carbon atoms, R<sub>4</sub> is an alkylene group containing 2 or 3 carbon atoms and n is from 4 to 20, wherein the concentration of the glyphosate is from 240 to 550 g/l based on glyphosate acid. Claims 3-12, 14, 16 and 19-20 depend from independent claim 1 and recite additional claim features.

Appellants' claimed invention, as embodied in independent claim 22, is directed to methods of reducing the foaming of a glyphosate concentrate composition having a concentration of from 240 to 550 g/l based on glyphosate acid, wherein the method comprises incorporating in the composition a poly(alkylene oxide) alkanol of formula (I) as described above.

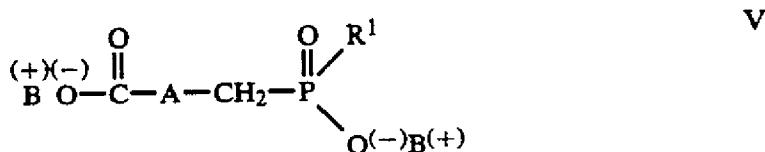
**1. Art Relied Upon By Examiner Arnold**

**a. Moreno**

The teaching of Moreno is directed to solid, non-hygroscopic monoammonium salts of formula I:



wherein  $R^1$  is hydroxy or alkyl; A is  $C_1$  to  $C_4$  alkyl-amino or an amino-alkyl group containing a primary or a secondary amino group; and B is ammonium ion or an alkyl-substituted ammonium ion, which is substantially free of diammonium salts as shown in formula V:



The “Background of the Invention” section of Moreno describes the motivation for the disclosed invention, namely, to provide solid, non-hygroscopic monoammonium salts of formula I that can be used in solid formulations so as to avoid higher transportation and storage costs associated with aqueous pesticidal compositions, as well as environmental and health concerns associated with the hygroscopic versions of salts of formula I. In particular, the teaching of Moreno specifically discloses from column 1, line 52 to column 2, line 7:

It was therefore the aim of our invention to find a method whereby the mono-ammonium salts of formula I - especially the mono-isopropylammonium salt of N-(phosphonomethyl)glycine and the mono-isopropylammonium salt of (3-amino-3-carboxy-propyl)-methane phosphinic acid can be obtained in a form which is non-hygroscopic, enabling thus the transportation, commercialization and even the use in solid form, or - when direct use of the pesticide to the field is carried out in aqueous solution - to ensure that the solid can be dissolved before use, bringing thus transportation and storage to reasonable costs as compared with the present situation when aqueous solutions are transported and stored. The aqueous solutions in commerce contain 30-50% of the active ingredient as a maximum. Handling of the hygroscopic salts also causes environmental and health-care problems which would be avoided with non-sticky, non-hygroscopic products. The products have mostly acidic character and attack even the material in which they are transported so that greatest care and the proper material for their protection is needed - which all increase the costs of application.

The teaching of Moreno is further directed to solid herbicidal compositions

containing the solid, non-hygroscopic monoammonium salts of formula I, as well as their use. From column 7, line 11 to column 8, line 58, Moreno discloses various components that may be used in combination with the solid, non-hygroscopic monoammonium salts of formula I to form solid herbicidal compositions. In column 8, lines 59-62, Moreno states the following regarding the disclosed solid herbicidal compositions:

Being solid products the compositions may take different forms depending on the requirements of use such as pellets, powders, tablets, granules using suitable apparatuses.

The teaching of Moreno further discloses solid herbicidal compositions containing the solid, non-hygroscopic monoammonium salts of formula I within a bag, wherein the bag is formed from a water-soluble polymer (e.g., polyvinyl alcohol). See, for example, Moreno, column 9, line 64 to column 10, line 47.

**b. Wikeley**

The teaching of Wikeley is directed to low-foam, physically stable aqueous glyphosate formulations, including aqueous glyphosate concentrates, wherein the disclosed aqueous glyphosate formulations comprise (i) glyphosate or a water-soluble salt thereof, (ii) an alkylglycoside surfactant, and (iii) a quaternary ammonium salt surfactant.

Throughout the teaching of Wikeley, Wikeley describes the need in the art for storage-stable, low-foaming, biologically-active glyphosate concentrates that can be diluted prior to use with low-foaming properties. See, for example, Wikeley, column 1, line 54 to column 2, line 5. The teaching of Wikeley provides such storage-stable, low-foaming, biologically-active glyphosate concentrates and methods of using such storage-stable, low-foaming, biologically-active glyphosate concentrates.

**c. Nielson'782**

The teaching of Nielson'782 is directed to pesticidal concentrates comprising a pesticidal component suspended in an oily component. The disclosed pesticidal concentrates comprise a surfactant comprising one or more specific stabilizing constituents, and may optionally comprise one or more of: water, a filler, a non-ionic surfactant and an ionic surfactant. The disclosed pesticidal concentrates are used to prepare “ready-to-use-spray” liquids comprising about 0.1 to 10 wt% of the disclosed concentrate and 90 to 99.9 wt% water.

**d. Nielson'847**

The teaching of Nielson'847 is directed to concentrated herbicide preparations comprising (i) at least one herbicide in an amount of 5 to 58 wt%, the herbicide being fine-grained and suspended in a liquid aqueous phase, and containing at least one primary, secondary or tertiary amino group, at least one carboxylic acid group and at least one phosphor containing acid group, and (ii) at least 5 wt% of an electrolyte dissolved in the liquid aqueous phase, the electrolyte not being a surfactant.

**2. The Obviousness Rejection Based on Moreno In View of Wikeley, Nielson'782 and Nielson'847**

Examiner Arnold maintains the position that one of ordinary skill in the art, given the teaching of Moreno directed to solid herbicidal compositions, would have been motivated to (1) seek out the teachings of Wikeley, Nielson'782 and Nielson'847 directed to liquid herbicidal compositions, and (2) subsequently form aqueous glyphosate concentrates comprising (i) glyphosate at a concentration of from 240 to 550 g/l based on glyphosate acid, and (ii) a poly(alkylene oxide) alkanol having formula (I) as recited in Appellants' claimed invention. Appellants disagree.

Appellants respectfully submit that the proposed combination and subsequent modification of the art, as suggested by Examiner Arnold, ignores the principle of operation of the teaching of Moreno, namely, the use of solid herbicidal compositions so as to avoid the transportation, storage, environmental and health problems associated with liquid herbicidal compositions. See again, Moreno, column 1, line 52 to column 2, line 7. The Federal Courts have frowned on such a modification of the prior art. As stated by the Court in *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959), "If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious."

Given the clear teaching of Moreno, Appellants respectfully submit that the teaching of Moreno teaches away from Examiner Arnold's proposed combination and subsequent modification of the teachings of Moreno, Wikeley, Nielson'782 and Nielson'847. As noted above, the teaching of Moreno specifically instructs one skilled in the art to utilize solid

herbicidal compositions, and avoid the problems associated with liquid herbicidal compositions. For at least this reason, Appellants respectfully submit that Examiner Arnold has failed to make a *prima facie* case of obviousness based on the proposed combination of the teaching of Moreno with the teachings of Wikeley, Nielson'782 and Nielson'847.

In response to the above arguments, Examiner Arnold maintains the position that the teaching of Moreno suggests concentrated liquid glyphosate compositions due to the inclusion of solubility test data in Table IV of Moreno. See, Table IV in columns 23-24. Appellants disagree.

As noted in Appellants' September 03, 2009 Request for Reconsideration, section "III.3. SOLUBILITY TESTS" and Table IV in columns 23-24 of Moreno describe a procedure for determining suitable solvents for separating solid, non-hygroscopic monoammonium salts having formula I from unwanted diammonium salts having formula V. As discussed in column 23, lines 59-62, suitable solvents for use in the processes of making solid, non-hygroscopic monoammonium salts of formula I are solvents "which show a reasonable solubility-difference between the salts and products that have to be separated." This portion of the teaching of Moreno does not suggest to one skilled in the art to formulate liquid herbicidal concentrates, and by doing so, ignore the clear teaching of Moreno, as discussed above, relating to the use of solid herbicidal compositions so as to avoid the problems associated with liquid herbicidal compositions.

For at least the reasons provided above, Appellants respectfully submit that the proposed combination of the teaching of Moreno with the teachings of Wikeley, Nielson'782 and Nielson'847, alone or in combination with the general state of the art, fails to make obvious Appellants' claimed invention as embodied in claims 1, 3-12, 14, 16 and 19-20 and 22. Accordingly, Appellants respectfully request reversal of this rejection.

## **B. CLAIM 13**

Claim 13 depends from independent claim 1 and recites additional claim features. In particular, claim 13 further recites that Appellants' claimed aqueous glyphosate concentrates of independent claim 1 further comprise an alkylglycoside.

**1. The Obviousness Rejection Based on Moreno In View of Wikeley, Nielson'782 and Nielson'847**

Appellants respectfully submit that the proposed combination of the teaching of Moreno with the teachings of Wikeley, Nielson'782 and Nielson'847, alone or in combination with the general state of the art, fails to make obvious Appellants' claimed invention as embodied in claim 13 for at least the reasons provided above regarding the rejection of claims 1, 3-12, 14, 16 and 19-20 and 22. In addition, Appellants respectfully submit that the proposed combination of the teaching of Moreno with the teachings of Wikeley, Nielson'782 and Nielson'847, alone or in combination with the general state of the art, fails to suggest to one skilled in the art to form aqueous glyphosate concentrates comprising the specific combination of: (i) glyphosate at a concentration of from 240 to 550 g/l based on glyphosate acid, (ii) a poly(alkylene oxide) alkanol having formula (I), and (iii) an alkylglycoside.

Appellants maintain the position that there must be some motivation or reason for one skilled in the art, given the teaching of Moreno to (1) seek out the teachings of Wikeley, Nielson'782 and Nielson'847, and along with an understanding of the general state of the art, (2) subsequently choose Appellant's recited concentrate components from hundreds (or thousands) of possible concentrate components as suggested by Examiner Arnold. Appellants respectfully submit that the only motivation for modifying the compositions in the teaching of Moreno, as suggested in the January 07, 2010 final Office Action, has been gleaned from Appellants' original specification, not the art.

Appellants note that in *KSR International Co. v. Teleflex Inc.*, 127 S.Ct. 1727 (2007) (hereinafter, "the *KSR* case") and cases after the *KSR* case, the Court requires some motivation or reason for one skilled in the art to (i) combine elements of the prior art or (ii) modify a known compound in the way that a new invention does in order to render the new invention obvious. See, for example, the Court decision in *Takeda Chem. Indus., Ltd. v. Alphapharm Pty., Ltd.*, No. 2006-1329 (Fed. Cir. 2007) (hereinafter, "the *Takeda* case"), wherein the Federal Circuit stated:

While the *KSR* Court rejected a rigid application of the teaching, suggestion, or motivation ("TSM") test in an obviousness inquiry, the Court acknowledged the importance of identifying "a reason that would have prompted a person of ordinary skill in the relevant field to combine

the elements in the way the claimed new invention does" in an obviousness determination. *KSR*, 127 S. Ct. at 1731. Moreover, the Court indicated that there is "no necessary inconsistency between the idea underlying the TSM test and the *Graham* analysis." *Id.* As long as the test is not applied as a "rigid and mandatory" formula, that test can provide "helpful insight" to an obviousness inquiry. *Id.* Thus, in cases involving new chemical compounds, it remains necessary to identify some reason that would have led a chemist to modify a known compound in a particular manner to establish *prima facie* obviousness of a new claimed compound.

Although the holding in the *Takeda* case involved motivation for modifying a known compound, Appellants respectfully submit that a similar analysis applies to the required motivation for selecting and combining possible components from hundreds (or thousands) of possible herbicidal concentrate components. As discussed above and consistent with the holdings in the *KSR* case and the *Takeda* case, the art fails to provide any reason that would have lead one skilled in the art to (1) ignore the teaching of Moreno directed to solid, herbicidal compositions, and (2) formulate an aqueous glyphosate concentrate comprising the specific combination of: (i) glyphosate at a concentration of from 240 to 550 g/l based on glyphosate acid, (ii) a poly(alkylene oxide) alkanol having formula (I), and (iii) an alkylglycoside.

Examiner Arnold has not cited any reason or motivation for one skilled in the art to make the proposed modification of the composition of Moreno other than that the prior art discloses possible concentrate components along hundreds (or thousands) of possible herbicidal concentrate components. As noted above, the holdings of the *KSR* case and the *Takeda* case require "a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does" in an obviousness determination. For this reason alone, Appellants respectfully submit that Examiner Arnold has failed to make a *prima facie* case of obviousness with the proposed combination of the teaching of Moreno with the teachings of Wikeley, Nielson'782 and Nielson'847.

For at least the reasons given above, Appellants respectfully submit that a *prima facie* case of obviousness has not been made with regard to the rejection of claim 13 in view of the proposed combination of the teaching of Moreno with the teachings of Wikeley, Nielson'782 and Nielson'847. Accordingly, reversal of the rejection of claim 13 under 35 U.S.C. §103(a) in view of the proposed combination of the teaching of Moreno with the teachings of Wikeley,

Nielson'782 and Nielson'847 is respectfully requested.

### C. CLAIM 15

Claim 15 depends from independent claim 1 and recites additional claim features. In particular, claim 15 further recites that Appellants' claimed aqueous glyphosate concentrates of independent claim 1 further comprise an alkoxylated alkylamine.

#### 1. The Obviousness Rejection Based on Moreno In View of Wikeley, Nielson'782 and Nielson'847

Appellants respectfully submit that the proposed combination of the teaching of Moreno with the teachings of Wikeley, Nielson'782 and Nielson'847, alone or in combination with the general state of the art, fails to make obvious Appellants' claimed invention as embodied in claim 15 for at least the reasons provided above regarding the rejection of claims 1, 3-12, 14, 16 and 19-20 and 22.

In addition, for reasons similar to those provided above with regard to the rejection of claim 13, Appellants respectfully submit that the proposed combination of the teaching of Moreno with the teachings of Wikeley, Nielson'782 and Nielson'847, alone or in combination with the general state of the art, fails to suggest to one skilled in the art to form aqueous glyphosate concentrates comprising the specific combination of: (i) glyphosate at a concentration of from 240 to 550 g/l based on glyphosate acid, (ii) a poly(alkylene oxide) alkanol having formula (I), and (iii) an alkoxylated alkylamine.

Appellants respectfully submit that the art fails to provide any reason that would have lead one skilled in the art to (1) ignore the teaching of Moreno directed to solid, herbicidal compositions, and (2) formulate an aqueous glyphosate concentrate comprising the specific combination of: (i) glyphosate at a concentration of from 240 to 550 g/l based on glyphosate acid, (ii) a poly(alkylene oxide) alkanol having formula (I), and (iii) an alkoxylated alkylamine. Further, Appellants respectfully submit that the only motivation for modifying the compositions in the teaching of Moreno in an attempt to reproduce Appellants' claimed aqueous glyphosate concentrates, as suggested in the January 07, 2010 final Office Action, has been gleaned from Appellants' original specification, not the art.

For at least the reasons given above, Appellants respectfully submit that a *prima facie* case of obviousness has not been made with regard to the rejection of claim 15 in view of the proposed combination of the teaching of Moreno with the teachings of Wikeley, Nielson'782 and Nielson'847. Accordingly, reversal of the rejection of claim 15 under 35 U.S.C. §103(a) in view of the proposed combination of the teaching of Moreno with the teachings of Wikeley, Nielson'782 and Nielson'847 is respectfully requested.

#### **D. CLAIMS 17-18**

Claim 17 depends from independent claim 1 and recites additional claim features. In particular, claim 17 further recites that the glyphosate in Appellants' claimed aqueous glyphosate concentrates of independent claim 1 comprise a potassium salt.

Claim 18 depends from claim 17, and recites additional claim features.

##### **1. The Obviousness Rejection Based on Moreno In View of Wikeley, Nielson'782 and Nielson'847**

Appellants respectfully submit that the proposed combination of the teaching of Moreno with the teachings of Wikeley, Nielson'782 and Nielson'847, alone or in combination with the general state of the art, fails to make obvious Appellants' claimed invention as embodied in claim 15 for at least the reasons provided above regarding the rejection of claims 1, 3-12, 14, 16 and 19-20 and 22.

In addition, Appellants note that the teaching of Moreno further teaches away from the use of a potassium salt of glyphosate. The teaching of Moreno is directed to specific solid, non-hygroscopic monoammonium salts having formula I. One skilled in the art would have to ignore the teaching and essential inventive concept of Moreno in order to substitute a potassium salt for the disclosed solid, non-hygroscopic monoammonium salts.

For at least the reasons given above, Appellants respectfully submit that a *prima facie* case of obviousness has not been made with regard to the rejection of claims 17-18 in view of the proposed combination of the teaching of Moreno with the teachings of Wikeley, Nielson'782 and Nielson'847. Accordingly, reversal of the rejection of claims 17-18 under 35 U.S.C. §103(a) in view of the proposed combination of the teaching of Moreno with the

teachings of Wikeley, Nielson'782 and Nielson'847 is respectfully requested.

**E. CLAIM 21**

Claim 21 depends indirectly from independent claim 1 and recites additional claim features. In particular, claim 21 further recites that Appellants' claimed aqueous glyphosate concentrates of independent claim 1 further comprise ammonium sulphate at a concentration of from 80 to 140 g/l.

**1. The Obviousness Rejection Based on Moreno In View of Wikeley, Nielson'782 and Nielson'847**

Appellants respectfully submit that the proposed combination of the teaching of Moreno with the teachings of Wikeley, Nielson'782 and Nielson'847, alone or in combination with the general state of the art, fails to make obvious Appellants' claimed invention as embodied in claim 21 for at least the reasons provided above regarding the rejection of claims 1, 3-12, 14, 16 and 19-20 and 22.

In addition, for reasons similar to those provided above with regard to the rejection of claims 13 and 15, Appellants respectfully submit that the proposed combination of the teaching of Moreno with the teachings of Wikeley, Nielson'782 and Nielson'847, alone or in combination with the general state of the art, fails to suggest to one skilled in the art to form aqueous glyphosate concentrates comprising the specific combination of: (i) glyphosate at a concentration of from 240 to 550 g/l based on glyphosate acid, (ii) a poly(alkylene oxide) alkanol having formula (I), and (iii) ammonium sulphate at a concentration of from 80 to 140 g/l.

Appellants respectfully submit that the art fails to provide any reason that would have lead one skilled in the art to (1) ignore the teaching of Moreno directed to solid, herbicidal compositions, and (2) formulate an aqueous glyphosate concentrate comprising the specific combination of: (i) glyphosate at a concentration of from 240 to 550 g/l based on glyphosate acid, (ii) a poly(alkylene oxide) alkanol having formula (I), and (iii) ammonium sulphate at a concentration of from 80 to 140 g/l. Further, Appellants respectfully submit that the only motivation for modifying the compositions in the teaching of Moreno in an attempt to reproduce

Appellants' claimed aqueous glyphosate concentrates, as suggested in the January 07, 2010 final Office Action, has been gleaned from Appellants' original specification, not the art.

For at least the reasons given above, Appellants respectfully submit that a *prima facie* case of obviousness has not been made with regard to the rejection of claim 21 in view of the proposed combination of the teaching of Moreno with the teachings of Wikeley, Nielson'782 and Nielson'847. Accordingly, reversal of the rejection of claim 21 under 35 U.S.C. §103(a) in view of the proposed combination of the teaching of Moreno with the teachings of Wikeley, Nielson'782 and Nielson'847 is respectfully requested.

## **II. REJECTION OF CLAIMS 1 AND 3-22 UNDER 35 U.S.C. §103(A) IN VIEW OF NIELSON'782 IN COMBINATION WITH MORENO, WIKELEY AND NIELSON'847**

Claims 1 and 3-22 stand rejected under 35 U.S.C. §103(a) in view of the teaching of Nielson'782 in combination with the teachings of Moreno, Wikeley and Nielson'847. Reversal of this rejection is respectfully requested for the reasons provided below.

### **A. CLAIMS 1, 3-12, 14, 19-20 AND 22**

Appellants' claimed invention, as embodied in claims 1, 3-12, 14, 19-20 and 22, is described above.

#### **1. Art Relied Upon By Examiner Arnold**

##### **a. Nielson'782**

A description of the teaching of Nielson'782 may be relied upon above.

##### **b. Moreno**

A description of the teaching of Moreno may be relied upon above.

##### **c. Wikeley**

A description of the teaching of Wikeley may be relied upon above.

##### **d. Nielson'847**

A description of the teaching of Nielson'847 may be relied upon above.

**2. The Obviousness Rejection Based on Nielson'782 In View of Moreno, Wikeley and Nielson'847**

Examiner Arnold maintains the position that one of ordinary skill in the art, given the teaching of Nielson'782 directed to liquid pesticidal compositions comprising a pesticidal component suspended in an oily component, would have been motivated to (1) seek out the teachings of (i) Moreno directed to solid herbicidal compositions and (ii) Wikeley and Nielson'847 directed to liquid herbicidal compositions, and (2) subsequently form aqueous glyphosate concentrates comprising (i) glyphosate at a concentration of from 240 to 550 g/l based on glyphosate acid, and (ii) a poly(alkylene oxide) alkanol having formula (I) as recited in Appellants' claimed invention. Appellants disagree.

Appellants respectfully submit that one of ordinary skill in the art, given the teaching of Nielson'782 directed to liquid pesticidal compositions, would not have sought out the teaching of Moreno directed to solid herbicidal compositions given their divergent teachings and suggestions to one skilled in the art. However, Appellants respectfully submit that even if one of ordinary skill in the art were to be motivated to combine the teachings of Nielson'782, Moreno, Wikeley and Nielson'847, the combination of the teachings of Nielson'782, Moreno, Wikeley and Nielson'847 still fails to teach or suggest Appellants' claimed invention to one skilled in the art.

For reasons discussed above, Appellants respectfully submit that the combination of the teachings of Nielson'782, Moreno, Wikeley and Nielson'847 suggests to one skilled in the art to formulate solid, herbicidal compositions. To conclude otherwise ignores the principle of operation of the clear teaching of Moreno as discussed above. However, Appellants respectfully submit that even if the combination of the teachings of Nielson'782, Moreno, Wikeley and Nielson'847 were to suggest to one skilled in the art to formulate liquid, herbicidal compositions, the proposed combination does not teach or suggest Appellants' claimed invention, namely, aqueous glyphosate concentrates comprising (i) glyphosate at a concentration of from 240 to 550 g/l based on glyphosate acid, and (ii) a poly(alkylene oxide) alkanol having formula (I).

Appellants respectfully submit that the proposed combination of teachings from the art fails to provide any reason that would have lead one skilled in the art to (1) select specific components from the hundreds (or thousands) of possible components, and then (2) formulate

liquid herbicidal concentrates comprising the specific combination of: (i) glyphosate at a concentration of from 240 to 550 g/l based on glyphosate acid, and (ii) a poly(alkylene oxide) alkanol having formula (I). The teaching of Nielson'782 alone discloses hundreds of possible surfactants for use in the oily component-containing pesticidal concentrate compositions. See, for example, amino group-containing surfactants from column 4, line 64 to column 5, line 21; C<sub>5</sub>-<sub>30</sub> fatty alcohol-containing surfactants in column 7, line 59 to column 8, line 8; non-ionic surfactants in column 8, lines 9-37 such as block polymers which are condensates of polyoxyethylene and polyoxypropylene, ethoxylated, propoxylated or co-ethoxylated/propoxylated fatty alcohols, ethoxylated, propoxylated or co-ethoxylated/propoxylated mono-, di- or trialkyl phenols, and mono-, di- or poly(carboxyl) fatty acid esters; anionic surfactants from column 19, lines 45-63; and non-ionic surfactants in column 23, lines 4-20. In addition, the teachings of Moreno, Wikeley and Nielson'847 further disclose hundreds of possible herbicidal composition components. See, for example, Moreno, column 7, line 11 to column 9, line 53; Wikeley, column 3, line 12 to column 5, line 9; and Nielson'847, column 9, line 19 to column 12, line 23.

Further, Appellants respectfully submit that the only motivation for selecting the recited components in Appellants' claimed aqueous glyphosate concentrates from the hundreds (or thousands) of possible herbicidal concentrate compositions components disclosed in the combination of teachings of Nielson'782, Moreno, Wikeley and Nielson'847, as suggested in the January 07, 2010 final Office Action, has been gleaned from Appellants' original specification, not the art.

For at least the reasons provided above, Appellants respectfully submit that the proposed combination of the teaching of Nielson'782 with the teachings of Moreno, Wikeley, and Nielson'847, alone or in combination with the general state of the art, fails to make obvious Appellants' claimed invention as embodied in claims 1, 3-12, 14, 16 and 19-20 and 22. Accordingly, Appellants respectfully request reversal of this rejection.

## **B. CLAIM 13**

Claim 13 depends from independent claim 1 and recites additional claim features. In particular, claim 13 further recites that Appellants' claimed aqueous glyphosate concentrates

of independent claim 1 further comprise an alkylglycoside.

**1. The Obviousness Rejection Based on Nielson'782 In View of Moreno, Wikeley and Nielson'847**

Appellants respectfully submit that the proposed combination of the teaching of Nielson'782 with the teachings of Moreno, Wikeley, and Nielson'847, alone or in combination with the general state of the art, fails to make obvious Appellants' claimed invention as embodied in claim 13 for at least the reasons provided above regarding the rejection of claims 1, 3-12, 14, 16 and 19-20 and 22. In addition, Appellants respectfully submit that the proposed combination of the teaching of Nielson'782 with the teachings of Moreno, Wikeley, and Nielson'847, alone or in combination with the general state of the art, fails to suggest to one skilled in the art to form aqueous glyphosate concentrates comprising the specific combination of: (i) glyphosate at a concentration of from 240 to 550 g/l based on glyphosate acid, (ii) a poly(alkylene oxide) alkanol having formula (I), and (iii) an alkylglycoside.

Appellants maintain the position that there must be some motivation or reason for one skilled in the art, given the teaching of Nielson'782 to (1) seek out the divergent teachings of Moreno, Wikeley and Nielson'847, and along with an understanding of the general state of the art, (2) subsequently choose Appellant's recited concentrate components from hundreds (or thousands) of possible concentrate components, disclosed in the teachings of Nielson'782, Moreno, Wikeley, and Nielson'847, as suggested by Examiner Arnold. Appellants respectfully submit that the only motivation for selecting the recited components in Appellants' claimed aqueous glyphosate concentrates from the hundreds (or thousands) of possible herbicidal concentrate compositions components disclosed in the combination of teachings of Nielson'782, Moreno, Wikeley and Nielson'847, as suggested in the January 07, 2010 final Office Action, has been gleaned from Appellants' original specification, not the art.

Examiner Arnold has not cited any reason or motivation for one skilled in the art to (1) make the proposed combination of divergent teachings, and (2) subsequently formulate Appellants' claimed aqueous glyphosate concentrates from the hundreds (or thousands) of possible herbicidal concentrate components disclosed in the combination of teachings of Nielson'782, Moreno, Wikeley and Nielson'847. As noted above, the holdings of the *KSR* case

and the *Takeda* case require “a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does” in an obviousness determination. For this reason alone, Appellants respectfully submit that Examiner Arnold has failed to make a *prima facie* case of obviousness with the proposed combination of the teaching of Nielson’782 with the teachings of Moreno, Wikeley and Nielson’847.

For at least the reasons given above, Appellants respectfully submit that a *prima facie* case of obviousness has not been made with regard to the rejection of claim 13 in view of the proposed combination of the teaching of Nielson’782 with the teachings of Moreno, Wikeley and Nielson’847. Accordingly, reversal of the rejection of claim 13 under 35 U.S.C. §103(a) in view of the proposed combination of the teaching of Nielson’782 with the teachings of Moreno, Wikeley and Nielson’847 is respectfully requested.

### **C. CLAIM 15**

Claim 15 depends from independent claim 1 and recites additional claim features. In particular, claim 15 further recites that Appellants’ claimed aqueous glyphosate concentrates of independent claim 1 further comprise an alkoxylated alkylamine.

#### **1. The Obviousness Rejection Based on Nielson’782 In View of Moreno, Wikeley and Nielson’847**

Appellants respectfully submit that the proposed combination of the teaching of Nielson’782 with the teachings of Moreno, Wikeley and Nielson’847, alone or in combination with the general state of the art, fails to make obvious Appellants’ claimed invention as embodied in claim 15 for at least the reasons provided above regarding the rejection of claims 1, 3-12, 14, 16 and 19-20 and 22.

In addition, for reasons similar to those provided above with regard to the rejection of claim 13, Appellants respectfully submit that the proposed combination of the teaching of Nielson’782 with the teachings of Moreno, Wikeley and Nielson’847, alone or in combination with the general state of the art, fails to suggest to one skilled in the art to form aqueous glyphosate concentrates comprising the specific combination of: (i) glyphosate at a

concentration of from 240 to 550 g/l based on glyphosate acid, (ii) a poly(alkylene oxide) alkanol having formula (I), and (iii) an alkoxylated alkylamine.

Appellants respectfully submit that the art fails to provide any reason that would have lead one skilled in the art to (1) seek out the divergent teachings of Moreno, Wikeley and Nielson'847, and along with an understanding of the general state of the art, (2) subsequently choose Appellants' recited concentrate components, namely, the specific combination of: (i) glyphosate at a concentration of from 240 to 550 g/l based on glyphosate acid, (ii) a poly(alkylene oxide) alkanol having formula (I), and (iii) an alkoxylated alkylamine, from hundreds (or thousands) of possible concentrate components disclosed in the teachings of Nielson'782, Moreno, Wikeley, and Nielson'847. Further, Appellants respectfully submit that the only motivation for modifying the disclosed compositions of the art in an attempt to reproduce Appellants' claimed aqueous glyphosate concentrates, as suggested in the January 07, 2010 final Office Action, has been gleaned from Appellants' original specification, not the art.

For at least the reasons given above, Appellants respectfully submit that a *prima facie* case of obviousness has not been made with regard to the rejection of claim 15 in view of the proposed combination of the teaching of Nielson'782 with the teachings of Moreno, Wikeley and Nielson'847. Accordingly, reversal of the rejection of claim 15 under 35 U.S.C. §103(a) in view of the proposed combination of the teaching of Nielson'782 with the teachings of Moreno, Wikeley and Nielson'847 is respectfully requested.

#### **D. CLAIMS 17-18**

Claim 17 depends from independent claim 1 and recites additional claim features. In particular, claim 17 further recites that the glyphosate in Appellants' claimed aqueous glyphosate concentrates of independent claim 1 comprise a potassium salt.

Claim 18 depends from claim 17, and recites additional claim features.

#### **1. The Obviousness Rejection Based on Nielson'782 In View of Moreno, Wikeley and Nielson'847**

Appellants respectfully submit that the proposed combination of the teaching of Nielson'782 with the teachings of Moreno, Wikeley and Nielson'847, alone or in combination

with the general state of the art, fails to make obvious Appellants' claimed invention as embodied in claim 15 for at least the reasons provided above regarding the rejection of claims 1, 3-12, 14, 16 and 19-20 and 22.

In addition, Appellants note that the teaching of Moreno further teaches away from the use of a potassium salt of glyphosate. The teaching of Moreno is directed to specific solid, non-hygroscopic monoammonium salts having formula I. One skilled in the art would have to ignore the teaching and essential inventive concept of Moreno in order to substitute a potassium salt for Moreno's disclosed solid, non-hygroscopic monoammonium salts in any composition resulting from the combined teachings of Nielson'782, Moreno, Wikeley and Nielson'847.

As with the rejection of claims 13 and 15 in view of the proposed combination of the teaching of Nielson'782 with the teachings of Moreno, Wikeley and Nielson'847, Appellants respectfully submit that the art fails to provide any reason that would have lead one skilled in the art to (1) seek out and combine the divergent teachings of Nielson'782, Moreno, Wikeley and Nielson'847, and along with an understanding of the general state of the art, (2) subsequently choose Appellants' recited concentrate components, namely, the specific combination of: (i) a potassium salt of glyphosate at a concentration of from 240 to 550 g/l based on glyphosate acid, and (ii) a poly(alkylene oxide) alkanol having formula (I), from hundreds (or thousands) of possible concentrate components disclosed in the teachings of Nielson'782, Moreno, Wikeley, and Nielson'847. Further, Appellants respectfully submit that the only motivation for combining select components from the disclosed compositions of the art in an attempt to reproduce Appellants' claimed aqueous glyphosate concentrates, as suggested in the January 07, 2010 final Office Action, has been gleaned from Appellants' original specification, not the art.

For at least the reasons given above, Appellants respectfully submit that a *prima facie* case of obviousness has not been made with regard to the rejection of claims 17-18 in view of the proposed combination of the teaching of Nielson'782 with the teachings of Moreno, Wikeley and Nielson'847. Accordingly, reversal of the rejection of claims 17-18 under 35 U.S.C. §103(a) in view of the proposed combination of the teaching of Nielson'782 with the teachings of Moreno, Wikeley and Nielson'847 is respectfully requested.

**E. CLAIM 21**

Claim 21 depends indirectly from independent claim 1 and recites additional claim features. In particular, claim 21 further recites that Appellants' claimed aqueous glyphosate concentrates of independent claim 1 further comprise ammonium sulphate at a concentration of from 80 to 140 g/l.

**1. The Obviousness Rejection Based on Nielson'782 In View of Moreno, Wikeley and Nielson'847**

Appellants respectfully submit that the proposed combination of the teaching of Nielson'782 with the teachings of Moreno, Wikeley and Nielson'847, alone or in combination with the general state of the art, fails to make obvious Appellants' claimed invention as embodied in claim 21 for at least the reasons provided above regarding the rejection of claims 1, 3-12, 14, 16 and 19-20 and 22.

In addition, for reasons similar to those provided above with regard to the rejection of claims 13 and 15, Appellants respectfully submit that the proposed combination of the teaching of Nielson'782 with the teachings of Moreno, Wikeley and Nielson'847, alone or in combination with the general state of the art, fails to suggest to one skilled in the art to form aqueous glyphosate concentrates comprising the specific combination of: (i) glyphosate at a concentration of from 240 to 550 g/l based on glyphosate acid, (ii) a poly(alkylene oxide) alkanol having formula (I), and (iii) ammonium sulphate at a concentration of from 80 to 140 g/l.

Appellants respectfully submit that the art fails to provide any reason that would have lead one skilled in the art to (1) seek out and combine the divergent teachings of Nielson'782, Moreno, Wikeley and Nielson'847, and along with an understanding of the general state of the art, (2) subsequently choose Appellants' recited concentrate components, namely, the specific combination of: (i) glyphosate at a concentration of from 240 to 550 g/l based on glyphosate acid, (ii) a poly(alkylene oxide) alkanol having formula (I), and (iii) ammonium sulphate at a concentration of from 80 to 140 g/l. Further, Appellants respectfully submit that the only motivation for Appellants respectfully submit that the only motivation for combining select components from the disclosed compositions of the art in an attempt to reproduce Appellants'

claimed aqueous glyphosate concentrates, as suggested in the January 07, 2010 final Office Action, has been gleaned from Appellants' original specification, not the art.

For at least the reasons given above, Appellants respectfully submit that a *prima facie* case of obviousness has not been made with regard to the rejection of claim 21 in view of the proposed combination of the teaching of Nielson'782 with the teachings of Moreno, Wikeley and Nielson'847. Accordingly, reversal of the rejection of claim 21 under 35 U.S.C. §103(a) in view of the proposed combination of the teaching of Nielson'782 with the teachings of Moreno, Wikeley and Nielson'847 is respectfully requested.

**CONCLUSION**

For at least the reasons given above, Appellants respectfully submit that the art of record in combination with a general understanding of the art fails to make obvious the claimed invention as embodied in Appellants' claims 1 and 3-22. Accordingly, it is respectfully submitted that each of the above rejections should be reversed.

Please charge any additional fees or credit any overpayment to Withers & Keys, LLC, Deposit Account No. 503025.

Respectfully submitted,

/James D. Withers/

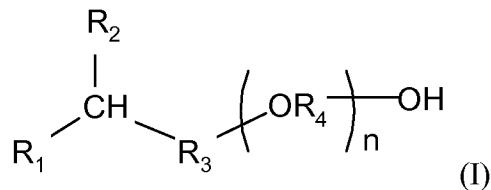
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Syngenta Docket No.: 50679  
W&K Docket No.: 10075.0039USWO

**CLAIMS APPENDIX**

1. An aqueous glyphosate concentrate comprising glyphosate and a poly(alkylene oxide) alkanol having the formula



wherein R<sub>1</sub> and R<sub>2</sub> are methyl or ethyl, R<sub>3</sub> is a straight chain alkylene group containing from 5 to 12 carbon atoms, R<sub>4</sub> is an alkylene group containing 2 or 3 carbon atoms and n is from 4 to 20, wherein the concentration of the glyphosate is from 240 to 550 g/l based on glyphosate acid.

3. The aqueous glyphosate concentrate according to claim 1 wherein the group (OR<sub>4</sub>)<sub>n</sub> is a poly (ethylene oxide) group, poly (propylene oxide) group or a mixed poly (ethylene oxide/propylene oxide) group.

4. The aqueous glyphosate concentrate according to claim 1 wherein n is from 6 to 14.

5. The aqueous glyphosate concentrate according to claim 4 wherein n is from 6 to 10.

6. The aqueous glyphosate concentrate according to claim 1 wherein R<sub>1</sub> and R<sub>2</sub> are both methyl.

7. The aqueous glyphosate concentrate according to claim 1 wherein R<sub>3</sub> contains from 7 to 11 carbon atoms.
8. The aqueous glyphosate concentrate according to claim 1 wherein the poly(alkylene oxide) alkanol of formula (I) is ethoxylated, propoxylated or mixed alkoxyLATED/propoxylated iso-tridecyl alcohol wherein the degree of alkoxylation is from 6 to 14.
9. The aqueous glyphosate concentrate according to claim 8 wherein the poly(alkylene oxide) alkanol of formula (I) is isotridecyl alcohol having a degree of alkoxylation of 8.
10. The aqueous glyphosate concentrate according to claim 1 wherein the concentration of the compound of formula (I) is from 1 to 50 g/l.
11. The aqueous glyphosate concentrate according to claim 10 wherein the concentration of the compound of formula (I) is from 1 to 20 g/l.
12. The aqueous glyphosate concentrate according to claim 1 which contains an additional bioperformance enhancing adjuvant.
13. The aqueous glyphosate concentrate according to claim 12 wherein the additional bioperformance enhancing adjuvant is an alkylglycoside.

14. The aqueous glyphosate concentrate according to claim 12 wherein the additional bioperformance enhancing adjuvant is present at a concentration of from 80 g/l to 250 g/l.

15. The aqueous glyphosate concentrate according to claim 13 which additionally contains an alkoxylated alkylamine.

16. The aqueous glyphosate concentrate according to claim 1 which comprises an additional anti-foam to reduce foaming of the diluted product.

17. The aqueous glyphosate concentrate according to claim 1 wherein the glyphosate is a potassium salt.

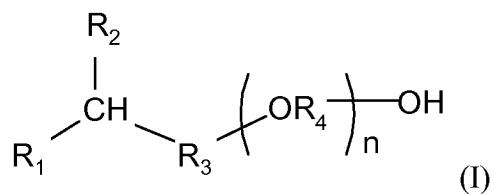
18. The aqueous glyphosate concentrate according to claim 17 wherein the concentration of the glyphosate is from 400 to 500 g/l based on glyphosate acid.

19. The aqueous glyphosate concentrate according to claim 1 wherein the glyphosate is an ammonium salt.

20. The aqueous glyphosate concentrate according to claim 19 wherein the concentration of the glyphosate is from 340 to 380 g/l based on glyphosate acid.

21. The aqueous glyphosate concentrate according to claim 19 which additionally contains ammonium sulphate at a concentration of from 80 to 140 g/l.

22. A method of reducing the foaming of a glyphosate concentrate composition having a concentration of from 240 to 550 g/l based on glyphosate acid which comprises incorporating in the composition a poly(alkylene oxide) alkanol of formula (I):



wherein R<sub>1</sub> and R<sub>2</sub> are methyl or ethyl, R<sub>3</sub> is a straight chain alkylene group containing from 5 to 12 carbon atoms, R<sub>4</sub> is an alkylene group containing 2 or 3 carbon atoms and n is from 4 to 20.

**EVIDENCE APPENDIX**

None

**RELATED PROCEEDINGS APPENDIX**

None